

Contents of Applied Physics A 50

This listing presents the papers in alphabetical order of the first author, subdivided into the sections "Solids and Materials: Physical and Chemical Properties" and "Surfaces and Multilayers: Growth, Modification, and Integration". The Author Index that follows covers *Applied Physics A* and *B*, and is presented in tabular form. The names are listed in alphabetical order in the first column. The second and third columns contain the bibliographic data necessary to locate the paper. The issue is specified by the number separated from the volume number by a slash. The PACS numbers given in the fourth column may be used in conjunction with the PACS listing on the left to infer the topic of a paper.

Solids and Materials

Abdelghany A.:

Thermal conductivity of selenium doped with indium and iodine in the solid and liquid states.

Appl. Phys. A 50/5, 463-464 (1990) PACS: 66.60 66.70

Bjergesen P., Alford T.L., Lilienfeld D.A., Johnson H.H.:

Low temperature ion beam mixing of bilayers and multilayers in the Ti-Cu system.

Appl. Phys. A 50/2, 161-164 (1990) PACS: 81.20

Badwal S.P.S.:

Yttria tetragonal zirconia polycrystalline electrolytes for solid state electrochemical cells.

Appl. Phys. A 50/5, 449-462 (1990) PACS: 66.30 68.35

Boit C., Lau F., Sittig R.:

Gold diffusion in silicon by rapid optical annealing.

Appl. Phys. A 50/2, 197-205 (1990) PACS: 61.70 66.30

Brunthaler A., Köhler K.:

Temperature dependence of persistent photo-conductivity due to DX centers in $\text{Al}_x\text{Ga}_{1-x}\text{As}$.

Appl. Phys. A 50/5, 515-517 (1990) PACS: 71.55 72.80

Cabanski W., Schulz M.:

Tunneling anomaly in disordered metal silicide-silicon junctions.

Appl. Phys. A 50/6, 541-544 (1990) PACS: 71.45 73.30 73.40

Cerofolini G.F., Polignano M.L.:

Residual non-idealities in the almost ideal silicon p-n junction.

Appl. Phys. A 50/3, 273-286 (1990) PACS: 85.30 72.20 73.40 61.70

CHEN J., REN C., CHEN G., YANG J., ZHAO X., XIE L., ZOU S.:

The mechanism of copper oxide segregations in the Y-Ba-Cu-O/YSZ thin films.

Appl. Phys. A 50/2, 165-168 (1990) PACS: 66.30 68.20 68.48 74.70

Consolati G., Quasso F.:

On the origin of the intermediate component in the positron lifetime spectra in polymers.

Appl. Phys. A 50/1, 43-48 (1990) PACS: 36.10 71.60 78.70

Dadlari D., Chirtoc M., Bicanic D.:

On the photopyroelectric detection of phase transitions. Application to ferroelectric materials.

Appl. Phys. A 50/4, 357-360 (1990) PACS: 64.00 78.00

Donath M., Schönhense G., Ertl K., Dose V.:

Influence of surface roughness and chemisorption on magnetic hysteresis curves of a Ni(110)-surface observed by spin-resolved inverse photoemission.

Appl. Phys. A 50/1, 49-55 (1990) PACS: 75.30P 75.60 79.60

Germanova K., Donchev V., Valchev V., Hardalov Ch., Yanchev I.:

On the maximum in Hall coefficient temperature dependence in medium-doped n-GaAs.

Appl. Phys. A 50/4, 369-372 (1990) PACS: 71.55 72.80

Grosse P., Harbecke B., Heinz B., Jantz W., Maier M.:

Characterization of conducting GaAs multilayers by infrared spectroscopy at oblique incidence.

Appl. Phys. A 50/1, 7-12 (1990) PACS: 78.20 78.65

Haegel N.M., Kao Y.J.:

Bulk and near-surface annealing behavior of the 0.8 eV luminescence in semi-insulating gallium arsenide.

Appl. Phys. A 50/3, 249-253 (1990) PACS: 78.60D 71.55

Hage J., Prigge H., Wagner P.:

A copper- and boron-related defect in silicon.

Appl. Phys. A 50/3, 241-247 (1990) PACS: 61.70 78.30

HAN G., WANG Y., WANG J., WANG N., JIAO X.:

Electromagnetic properties of bulk Bi-Pb-Sr-Ca-Cu-O superconductor at low magnetic fields.

Appl. Phys. A 50/4, 373-377 (1990) PACS: 74.00

Harnischfeger P., Jungnickel B.-J.:

Piezoelectric properties of electron-irradiated poly(vinylidene fluoride).

Appl. Phys. A 50/6, 523-529 (1990) PACS: 61.41 61.80 77.60

Ito Y., Hirose M., Tabata Y.:

Positron annihilation in synthetic zeolites (II): Magnetic quenching effect.

Appl. Phys. A 50/1, 39-42 (1990) PACS: 78.70D 81.90

Jin S., Atrens A.:

Passive films on stainless steels in aqueous media.

Appl. Phys. A 50/3, 287-300 (1990) PACS: 68.45 81.60

Kakoschke R., Bussmann E., Föll H.:

Modelling of wafer heating during rapid thermal processing.

Appl. Phys. A 50/2, 141-150 (1990) PACS: 81.40

Kielczynski P., Pajewski W., Szalewski M.:

Shear horizontal surface waves on piezoelectric ceramic with layered structure.

Appl. Phys. A 50/3, 301-304 (1990) PACS: 68.25 68.60

LI R.-S., LI C.-F., ZHANG W.-L.:

Bombardment-induced segregation of Cu in Pt-Cu alloy observed using different energy Auger line combinations.

Appl. Phys. A 50/2, 169-175 (1990) PACS: 79.20

Lo Savio M., Oliveri M.E.:

A novel preparation method and investigation of sprayed CdS films.

Appl. Phys. A 50/1, 17-21 (1990) PACS: 81.15

Marshall A., O'Donnell K.P., Yamaga M., Henderson B., Cockayne B.:

Disorder and the shape of the R-lines in Cr^{3+} -doped garnets.

Appl. Phys. A 50/6, 565-572 (1990) PACS: 78.40 78.55 42.55

Marshall D.B., DeWams R.E., Morgan P.E.D., Ratto J.J.:

Magnetic forces in thallium- and bismuth-based superconductors.

Appl. Phys. A 50/4, 445-448 (1990) PACS: 74.60 85.25 74.30

Münzberg M., Palm H., Schulz M.:

Nearest neighbor effect on capture cross sections measured in IR photo-transients on Si:In.

Appl. Phys. A 50/3, 255-263 (1990) PACS: 72.20J 71.55 72.40

Ochando M.A., Llopis J.:

Effect of oxidizing anneals on thermochemically reduced MgO:Ni crystals.

Appl. Phys. A 50/1, 23-26 (1990) PACS: 61.16 78.60 81.40

Ochando M.A., Llopis J.:

Precipitation in thermochemically reduced MgO:Co crystals.

Appl. Phys. A 50/2, 157-160 (1990) PACS: 61.16 78.60 81.40

Ohno Y., Nakamura T., Kita H.:

Angle and speed distributions of hydrogen desorbing thermally from metal surfaces.

Appl. Phys. A 50/6, 551-564 (1990) PACS: 68.10J 68.45 82.20

Omini M., Sparavigna A., Strigazzi A.:

Thermal diffusivity and biot number: A new experimental method.

Appl. Phys. A 50/1, 35-37 (1990) PACS: 65.00 44.10 44.50

Ouseph P.J.:

Effects of an external force on levitation of a magnet over a superconductor.

Appl. Phys. A 50/4, 361-364 (1990) PACS: 74.60G 85.25 74.30

Peralta S.B., Mandelis A.:

Optical saturation in the photothermal spectroscopy of fluorescent materials.

Appl. Phys. A 50/4, 353-356 (1990) PACS: 61.80 78.50

Rantala J., Hartikainen J., Jaarinen J.:

Photothermal determination of vertical crack lengths in silicon nitride.

Appl. Phys. A 50/5, 465-471 (1990) PACS: 44.30 07.20 07.60

Rogalski A., Rutkowski J., Jozwikowski K., Piotrowski J., Nowak Z.:

The performance of $\text{Hg}_{1-x}\text{Zn}_x\text{Te}$ photodiodes.

Appl. Phys. A 50/4, 379-384 (1990) PACS: 72.40 85.60

Sato T., Haneda K., Seki M., Iijima T.:

Morphology and magnetic properties of ultrafine ZnFe_2O_4 particles.

Appl. Phys. A 50/1, 13-16 (1990) PACS: 75.50 76.80 61.50

Sharma S.K., Banerjee S., Kuldeep, Jain A.K.:

Diffusion of Au in amorphous $\text{Zr}_{1-x}\text{Ni}_{100-x}$ alloys studied by Rutherford backscattering spectrometry.

Appl. Phys. A 50/4, 365-368 (1990) PACS: 66.30 62.40

SHI Y., SHEN D.X., WU F.M., DENG M.K., CHENG K.J.:

On the formation of defect clusters in neutron-irradiated Si.

Appl. Phys. A 50/3, 305-309 (1990) PACS: 61.80H 61.70 66.30

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Light scattering topography and photoluminescence topography.
Appl. Phys. A 50/6, 531-540 (1990) PACS: 61.70 78.55 78.65
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Origin of ion beam mixing effects on morphological features in solid-phase titanium silicide formation.
Appl. Phys. A 50/3, 265-267 (1990) PACS: 61.80 81.10
- Szymonski M., Postawa Z.:
Theoretical energy distributions of atoms sputtered from elastic collision spikes by monomer and dimer ion bombardment.
Appl. Phys. A 50/3, 269-272 (1990) PACS: 79.20N 61.80
- Tapfer L., Grambow P.:
X-ray Bragg diffraction on periodic surface gratings.
Appl. Phys. A 50/1, 3-6 (1990) PACS: 42.10H 61.10 78.65 78.70
- Wachsman E.D., Jiang N., Frank C.W., Mason D.M., Stevenson D.A.:
Spectroscopic investigation of oxygen vacancies in solid oxide electrolytes.
Appl. Phys. A 50/6, 545-549 (1990) PACS: 61.70 66.30
- WANG H., MAO Z., ZHOU L., CHENG M., ZHOU G., CHEN Z.:
Influences of heat treatment on the superconducting properties of $\text{Bi}_{1.6}\text{Pb}_{0.3}\text{Sb}_{0.1}\text{Sr}_2\text{Ca}_2\text{Cu}_3\text{O}_x$.
Appl. Phys. A 50/3, 519-521 (1990) PACS: 74.10 74.70
- Weiss S., Beckmann R., Kassing R.:
The electrical properties of zinc in silicon.
Appl. Phys. A 50/2, 151-156 (1990) PACS: 61.70 71.55
- Surfaces and Multilayers**
- Ahn K.-Y., Stengl R., Tan T.Y., Gösele U., Smith P.:
Growth, shrinkage, and stability of interfacial oxide layers between directly bonded silicon wafers.
Appl. Phys. A 50/1, 85-94 (1990) PACS: 73.40
- Amato G., Benedetto G., Boarino L., Spagnolo R.:
Photothermal detection of surface states in amorphous silicon films.
Appl. Phys. A 50/5, 503-507 (1990) PACS: 78.50G 78.65
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The effect of substrate work function on work function reduction of Re/W alloy-coated impregnated cathodes.
Appl. Phys. A 50/6, 603-607 (1990) PACS: 73.30 79.40 85.10
- Baliga S., Jain A.L., Zachofsky W.:
Sputter deposition and characterization of Ni-Mn-O and Ni-Co-Mn-O spinels on polyimide and glass substrates.
Appl. Phys. A 50/5, 473-477 (1990) PACS: 81.15 73.60
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Crystallization features of silicon layers on thermo-insulated substrates under nanosecond laser radiation.
Appl. Phys. A 50/3, 321-324 (1990) PACS: 78.20 81.00
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On the reaction kinetics in laser-induced pyrolytic chemical processing.
Appl. Phys. A 50/4, 385-396 (1990) PACS: 42.50 68.00 82.65
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Coverage dependence of field emission flicker noise due to lithium adsorbed on the W(112) surface.
Appl. Phys. A 50/1, 95-100 (1990) PACS: 05.40 82.65 68.90 73.90
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Electronic transport properties of double layer metallic films.
Appl. Phys. A 50/2, 221-225 (1990) PACS: 72.15
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Quantitative infrared study of ultrathin MIS structures by grazing internal reflection.
Appl. Phys. A 50/6, 587-593 (1990) PACS: 73.40 77.55 78.20
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Kinetic ion-induced electron emission from the surface of random solids.
Appl. Phys. A 50/1, 111-129 (1990) PACS: 79.20
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Spectroscopic studies of real space indirect symmetric GaAs/AlAs short period superlattices.
Appl. Phys. A 50/2, 189-196 (1990) PACS: 78.65 78.55
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Synthesis of chromium silicide with laser pulses.
Appl. Phys. A 50/4, 411-415 (1990) PACS: 68.55 79.20 82.50
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Rapid thermal process-induced recombination centers in ion implanted silicon.
Appl. Phys. A 50/4, 405-410 (1990) PACS: 72.20J 81.40
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Anomalous photoacoustic behavior of semiconductors: Evidence for thermally generated surface deformations.
Appl. Phys. A 50/1, 69-83 (1990) PACS: 78.20N 65.70
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Investigation of poling field effects on PVDF pyroelectric detectors: Photoacoustic thermal diffusivity measurements.
Appl. Phys. A 50/4, 431-438 (1990) PACS: 78.90
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Laser nonlinear-optical probing of silicon/SiO₂ interfaces: Surface stress formation and relaxation.
Appl. Phys. A 50/4, 439-443 (1990) PACS: 42.65 68.35
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Comparison of profile tailing in SIMS analyses of various impurities in silicon using nitrogen, oxygen and neon ion beams at near-normal incidence.
Appl. Phys. A 50/4, 417-424 (1990) PACS: 79.20N 61.70 66.30
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The bandstructure of Pd(110) above the Fermi level.
Appl. Phys. A 50/2, 207-214 (1990) PACS: 71.20A 75.25 79.20
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Auger-induced rearrangement of an ion-bombarded SiO₂ surface: Influence of electron energy.
Appl. Phys. A 50/2, 183-187 (1990) PACS: 61.80F 68.20 79.20
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Field emission from a metal covered with a semiconducting layer: A model calculation.
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X-ray irradiation enhanced critical current density and strong pinning created in $\text{Gd}_1\text{Ba}_2\text{Cu}_3\text{O}_{7-x}$ thin films.
Appl. Phys. A 50/5, 509-514 (1990) PACS: 74.00 81.40
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Fabrication of lightguides in in-diffused bulk PMMA.
Appl. Phys. A 50/4, 425-430 (1990) PACS: 42.70 42.80 61.40 78.60
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Sub-gap absorption study of defects in ion-implanted and annealed Si layers.
Appl. Phys. A 50/5, 495-498 (1990) PACS: 78.20D 78.20 71.55
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Appl. Phys. A 50/3, 343-348 (1990) PACS: 52.50J 79.20 79.60
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Influence of electric field on heterogeneous reactions stimulated by laser light. I: Theory.
Appl. Phys. A 50/1, 27-34 (1990) PACS: 79.20D 81.40 81.60
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Influence of electric field on heterogeneous reactions stimulated by laser light. II: Experimental.
Appl. Phys. A 50/1, 101-105 (1990) PACS: 81.60 82.50 82.65
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Laser photolytic deposition of molybdenum and tungsten thin film microstructures.
Appl. Phys. A 50/2, 233-235 (1990) PACS: 81.15 82.50
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Appl. Phys. A 50/3, 339-342 (1990) PACS: 73.40Q 79.60 61.70
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Appl. Phys. A 50/2, 215-220 (1990) PACS: 68.55 82.65
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Passivation of n-GaAs(100) surface by a Langmuir-Blodgett film.
Appl. Phys. A 50/5, 499-502 (1990) PACS: 68.55 73.40
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Localized modification of magnetic properties in 304 stainless steel foil by MeV ion beam.
Appl. Phys. A 50/6, 573-576 (1990) PACS: 61.80 81.30 75.70

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Refraction effect of scattered X-ray fluorescence at surface.
Appl. Phys. A 50/4, 397-404 (1990) PACS:07.60H 07.85 78.70
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Photoabsorption of BCl_3 gas under pulsed ArF excimer laser irradiation.
Appl. Phys. A 50/3, 317-320 (1990) PACS:33.80 61.80 61.70
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Boron doping of silicon by excimer laser irradiation in reactive atmosphere. The incorporation mechanism.
Appl. Phys. A 50/5, 479-484 (1990) PACS:61.70T 79.20 42.60 82.65
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On the interpretation of the RHEED intensity oscillations during the growth of vicinal faces.
Appl. Phys. A 50/3, 349-352 (1990) PACS:68.55 82.65
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Excimer laser assisted selective epitaxy of GaP.
Appl. Phys. A 50/3, 325-330 (1990) PACS:68.55 42.60
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Appl. Phys. A 50/2, 227-231 (1990) PACS:68.55 73.60 81.15
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Laser-induced etching of titanium by Br_2 and CCl_3Br at 248 nm.
Appl. Phys. A 50/6, 609-615 (1990) PACS:82.65
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Investigation of three-terminal voltage-controlled switching devices prepared by molecular beam epitaxy.
Appl. Phys. A 50/5, 485-493 (1990) PACS:72.80E 85.30
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CW laser-assisted oxidation of thin Cd, In, Sn and Zn films in air.
Appl. Phys. A 50/3, 311-315 (1990) PACS:81.60 61.80 68.55
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Laser-assisted reaction of metals with oxygen.
Appl. Phys. A 50/2, 131-139 (1990) PACS:81.60 82.65 42.60
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Optical constants of thin CoSi_2 films on silicon.
Appl. Phys. A 50/2, 177-181 (1990) PACS:68.55 73.40 78.65
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Electron diffraction at stepped homogeneous and inhomogeneous surfaces.
Appl. Phys. A 50/1, 57-68 (1990) PACS:61.14H 68.35
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Sealing of bore-holes in Si crystals by epitaxial overgrowth below 560°C.
Appl. Phys. A 50/6, 583-585 (1990) PACS:81.10D
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Theoretical study of resonant tunneling in rectangular double-, triple-, quadruple-, and quintuple-barrier structures.
Appl. Phys. A 50/6, 577-581 (1990) PACS:73.20D 73.40 85.30
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Appl. Phys. A 50/1, 107-109 (1990) PACS:61.70
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Effects of nearest and next-nearest neighbour interaction parameters on atomic correlation functions of stepped surfaces.
Appl. Phys. A 50/6, 595-602 (1990) PACS:61.14H 68.35 68.55
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Properties of Fe/Si heterostructure grown by MOCVD.
Appl. Phys. A 50/2, 237-239 (1990) PACS:68.55